

## **FUSE FOR PROJECTED ORDNANCE**

### Abstract

An ordnance fuse apparatus is described that uses electrical and mechanical, and optical devices. The ordnance fuse apparatus includes a controller to control an optical switch and a laser to detonate an explosive charge of the ordnance. Other embodiments include an accelerometer and/or spin detector for detecting that the ordnance has been  
5 fired and an optical detector for detecting the proper operation of the laser and a position sensor for detecting correct positioning of the optical switch. Another embodiment includes a microlens to focus the laser optical signal onto the ignitor. In yet other embodiments, the explosive charge is detonated either by ignition of an ignitor or by a shock wave from the ignitor. The resulting ordnance fuse apparatus has  
10 significantly reduced size and improved performance and safety.